



1C Fosseyway Business Park, Stratford Road
Moreton-in-Marsh GL56 9NQ, UK
Phone: +44 1608 652 895 Mobile +44 7931 576538
jutta@fern.org
www.fern.org
www.sinkswatch.org



16 April 2007

FERN comments

on the Defra proposal on

‘Establishing a voluntary Code of Best practice for provision of carbon offsetting to UK customers’

1. FERN is a European non-governmental organization focused on forests and climate change. We work to achieve greater environmental and social justice in the policies and practises of the European Union, with a focus of FERN’s work on forests and forest peoples’ rights. FERN’s SinksWatch initiative (www.sinkswatch.org) has been created in 2001 with the aim of tracking and scrutinizing carbon ‘offset’ projects. Initially, SinksWatch’s main focus was on ‘offset’ projects using tree planting, particularly in areas where land tenure and land use rights are in dispute. Our area of work however has broadened since, in recognition that achieving the goals of the initiative required a wider critique and monitoring of carbon ‘offset’ schemes. In this context, FERN has pursued research into climate policies and carbon trading. Our research has been carried out in close collaboration with advocacy organisations in the Global South. FERN has also provided submissions and discussion papers on the Kyoto-related carbon ‘offset’ market, on specific carbon ‘offset’ projects and two Memoranda to the UK Parliament’s Environment Audit Committee¹. In relation to forests and climate change, FERN advocates addressing the links between forests and climate change in a way that honours forests as a safeguard against the impacts of extreme weather events without justifying the continued, additional and permanent release of carbon from fossil fuel burning and thus considers approaches linking funding for forest conservation with carbon trading as ill-suited to deliver on this objective.

In October 2004, FERN was among the principal organizers of a major international conference on “Carbon Trading: Consequences and Strategies” held in Durban, South Africa which led to the formation of the Durban Group for Climate Justice and the publication, in 2006, of the book ‘Carbon Trading. Critical Conversations on Climate Change, Privatisation and Power’, published

¹ These memoranda are available on www.sinkswatch.org; a transcript of the oral evidence provided to the EAC on the issue of voluntary offset schemes in February 2007 is available on the EAC website.

FERN promotes the conservation and sustainable management of forests and respect for the rights of forest peoples in the policies and practices of the European Union.

by the Sweden-based Dag Hammarskjold Foundation.² The comments submitted here draws on the analysis developed jointly with researchers and activists associated with the Durban Group for Climate Justice, academia and NGO networks.

2. FERN welcomes the Department for Environment, Food and Rural Affairs consultation on the voluntary carbon 'offset' market. We are grateful for the opportunity to comment on the proposal for a voluntary Code of Best Practise for the sector.

In addition to the specific questions outlined in the consultation document, we would like to add the following comments and observations:

2.1 FERN considers carbon 'offset' schemes a **dangerous distraction from generating public support for policies that will help avoid climate crisis and lead the way into a swift and just switch to low-carbon economies**. The book cited above provides detailed analysis underpinning this conclusion;

2.2 The consultation document states that 'carbon offsetting ... can help raise awareness'³. However, no analysis is provided on whether the message carbon 'offsets' give will help or hinder efforts to educate the public about the type of action required to avoid a climate crisis and enable a swift and just switch to low-carbon economies. It is our experience that carbon 'offsetting' teaches both that the climate problem is due to individual consumer choices and that it can be addressed by individual consumer action. **Reinforcing the belief that collective action is difficult and that climate action is highly technical, offset schemes transform a political problem into a drama of individual redemption**. Furthermore, by linking emission calculations with (unverifiable) reduction numbers, offsets reinforce the emphasis on quantitative over qualitative climate action. As systems analyst Gar Lipow states: "*I have a secret for you. Neither a tax nor a trading scheme nor any other pure market based scheme will address the problem. [...]. No offset scheme or carbon tax will build trains to replace trucks and cars and give people a meaningful and viable option to choose public transport over individual transport. No offset scheme or tax will stop deforestation or turn agriculture from an emissions source to an emission sink. No offset scheme will build HVDC lines which will be required to make renewable electricity from variable sources (such as wind and sun) reliable without huge storage expenses.*" Thus, by focusing on individual consumer action, 'offset' schemes risk to undermine education efforts aimed at building public support for policies that are able to bring about a swift and just switch to low-carbon economies. For any Code of Best Practise to live up to the claim of ensuring the public is provided with 'reliable, authoritative information' that will allow people to understand the relative impact of offsetting versus public policy and subsidy shifts, it will have to include **clear provisions which ensure that the public is informed about the shortcomings of offset schemes to build support for public policy and subsidy shifting because of the focus on attributing responsibility for climate change to individual consumer choices**.

² Free hard copies are available from FERN (info@fern.org) or from the Dag Hammarskjold Foundation (www.dhf.uu.se)

³ 3.5, Page 7 of the consultation document.

2.3 How will the Code of Best Practise ensure the public is not misled, given that **carbon ‘offset’ schemes are unable to verify their claimed quantity of reductions is truly additional to ‘what would have happened otherwise’?** The consultation document skips over this crucial aspect: It is not good enough, and indeed continues to be misleading, to say that “offsetting involves buying emission reduction credits (or carbon credits) that have reduced carbon emissions”, as the consultation document does on page 8 (3.8). This description fails to highlight that (a) “offsetting does not actually reduce emissions”, as the consultation document rightly states, at the top of the very same page and (b) it is not enough to claim that a project reduces emissions; the offset project has to provide evidence that these emission reductions are *in addition to or over and above the reductions that would have occurred in the absence of the offset project*. **This misleading ‘shorthand’ is used throughout the consultation document and calls into question the attention to detail that will go into providing the ‘reliable and authoritative information’ promised in the consultation document;**

2.4 To elaborate on this fundamental aspect of carbon offset claims: To sell carbon credits, every ‘offset’ project has to make the case that if the ‘offset’ project did not exist, more carbon dioxide would end up in the atmosphere. In other words, every ‘offset’ project calculates the volume of credits it can sell as *the difference between the emissions that ‘would have happened if the ‘offset’ project had not taken place’ and the emissions in the presence of the ‘offset’ project*. In order to determine the volume of credits that can be sold, each carbon ‘offset’ project thus has to answer the question of ‘what would have happened without the specific ‘offset’ project. As Chris Lang, author of the World Rainforest Movement report on the Mount Elgon ‘offset’ project in Uganda explains: "Anyone who has ever watched a game of football knows that this question is impossible to answer. What would have happened if Zinedine Zidane hadn't headbutted Italy's Marco Materazzi in the chest and been sent off in the 100th minute of the 2006 World Cup final? Would France have won?" Fascinating question for any football fan to discuss and speculate about the many ifs and buts - impossible however to know the answer to the question ‘what would have happened if..’

Every carbon ‘offset’ project does not only pretend to know the answer to this unanswerable question – they pretend to be able to give an exact figure. This figure will determine how many carbon credits the project can sell as saving over ‘what would have happened otherwise’. Evidence is plentiful, both in the voluntary and Kyoto-compliance offset market, of projects inflating this baseline figure in order to maximise the volume of credits the project will be entitled to sell. Mathematical formulae that have been developed to determine this number may reduce the range of possible answers and reduce the range within which a guess must be made - but an unverifiable guess it will always remain. Consequently no carbon ‘offset’ project can verify the claimed reductions. This ‘additionality’ conundrum has been recognised by many architects of the carbon market but the impossibility to verify the claimed credit volumes was reduced to ‘difficulties’, ‘problems’ and ‘risks’ and a series of ‘additionality tools’ were developed. None of these ‘tools’ and mathematical formulae however addresses the core of the issue: Carbon ‘offset’ projects rely on reducing a multitude of possible scenarios of ‘what would have happened without the ‘offset’ project’ to one single number. There however is no magical formula which could be employed to verify whether the assumption made is correct because the answer to the ‘additionality’ question is one of political decision, not mathematical deduction.

Given that this conceptual flaw of carbon ‘offsets’ cannot be remedied by increasing project scrutiny or by addressing what is often described as ‘offset market design’ shortcomings, there is no remedy to this underlying flaw and emission reduction claims made by ‘offset’ projects will always remain unverifiable. **The consultation document does not provide any information as to how the Government intends to live up to the challenge to provide ‘reliable, authoritative information’ to consumers when no reference is made in the entire consultation document about this inherent flaw of offset schemes.**

2.5 Tree planting and forest conservation offset projects remain popular among voluntary ‘offset’ providers. The climate impact of biological carbon released through deforestation and other land use changes however differs significantly from the impact of fossil carbon on the climate. Biological carbon is part of an active carbon pool in which carbon circulates between vegetation, atmosphere and oceans. Whilst deforestation and land use changes have upset the balance within the active carbon pool, the overall amount of carbon circulating between the three pools has remained largely constant over very long periods of time. Burning fossil carbon, on the other hand, increases this overall pool of active carbon. Due to this difference in their climate impact and the different nature of interaction with the atmosphere, claims of compensating the climate impact from release of fossil carbon with increased storage of biological carbon are unsubstantiated. On this basis alone, tree planting ‘offset’ claims are misleading and it should be unacceptable to treat credits from tree planting ‘offset’ projects as equivalent to fossil carbon releases. Annex 1 illustrates this difference and **FERN recommends exclusion of tree planting or forest conservation offset projects from the Code of Best Practise⁴**;

2.6 Tree planting ‘offset’ projects are faced with an additional set of measurement and accounting issues and carry a particular risk of exacerbating local land use conflicts. These accounting and measurement issues have been discussed in many published, scientifically robust studies showing that our current scientific understanding of the carbon cycle and its impact on climate change *does not* permit an accurate assessment of the overall long-term carbon gains and losses from tree planting or forest conservation ‘offset’ projects; Table 3 of FERN’s joint submission to the EAC enquiry into the international challenge of climate change (October 2004) provides reference to scientific publications between 1998 and 2003 showing that including emissions and gains from tree planting and forests in the Kyoto Protocol would render the accounting unverifiable. The same applies for the use of tree planting in ‘offset’ projects: the credit claims are unverifiable because of the significant gaps in human understanding of terrestrial carbon fluxes. Table 3 is included for ease of reference as Annex 2 to this submission. In fact, scientists cannot even know in advance all the factors related to biotic carbon that will affect climate, and all the nonlinear or non-continuous ways in which they may interact, making the problem even worse than mere uncertainty (Annex 3). The biological carbon fluxes are not only much less stable but also, more importantly, much less predictable, than the paths taken by fossil carbon left under the ground. In this context, it should also be noted that one of the most fervent advocates of the inclusion of forest management into the Kyoto Protocol, Canada, recently announced not to make use of the provision to account for carbon gains and losses from forest management due to the substantial risk of unpredictable releases, such as through fire and insect infestations. Such incidents have already occurred in ‘offset’ tree planting projects and brought significant hardship and economic loss to poor communities who signed a carbon offset

⁴ Such projects are not eligible for the Gold Standard label due to their potential to exacerbate land use conflicts and the unresolved impossibility to accurately measure carbon fluxes in terrestrial ecosystems.

contract in Ecuador⁵. Furthermore, no matter how much additional biological carbon could be cultivated, it could never be of an order of magnitude remotely comparable to what would be required to “soak up” the emissions from releasing into the atmosphere the remaining unmined fossil fuels. As Cambridge University forest historian Oliver Rackham stated in this context, to tell people to plant trees to help the climate is “like telling them to drink more water to keep down rising sea-levels.” FERN recommends exclusion of such projects from the Code of Best Practise⁶;

2.7 FERN, together with the Durban Group for Climate Justice, the World Rainforest Movement and several others have provided a significant number of case studies documenting the detrimental environmental and social impact of ‘offset’ projects. The conflicts generated or exacerbated by tree planting ‘offset’ projects are particularly worrying. Extensive documentation of and reference to these cases is provided in Chapter 4 of the recently published book ‘Carbon Trading. Critical Conversations on Climate Change, Privatisation and Power’ as well as in the October 2006 publication ‘Trouble in the Air’⁷. The World Rainforest Movement and FERN have further documented serious human rights abuses, land use conflicts and poor working conditions in several carbon ‘offset’ projects. At least one of these, the Kibale project in Uganda, sells carbon credits to UK based consultancies and their clients. The question of due diligence assessments of these carbon ‘offset’ outfits arises most acutely in such cases where projects directly or indirectly pose a threat to the well-being of communities affected by the project. The Uganda example also featured in the BBC Inside Out London area programme on 12 January 2007. The author of this submission visited the communities affected by the said project in summer 2006. A copy of the programme is available on request;

2.8 In FERN’s view, the relative paucity of documented cases of fraudulent claims and conflicts over individual projects is not indication of critics of ‘offset’ schemes overrating the problem but rather a result of near total lack of project scrutiny on the ground combined with a situation in which for the time being, both sellers and buyers / brokers of ‘offset’ credits benefit from the limited scrutiny of projects and credit volume claims; FERN’s experience with certification initiatives as well as with documenting the failings of carbon ‘offset’ projects highlight the need for rigorous and impartial monitoring of project’s impact on the ground. **Our experience has further shown that validation and verification under the CDM are highly insufficient to ensure the sustainability claims made by approved CDM projects are upheld**⁸. **A Best Practise Code would thus have to address this significant shortcoming of the CDM validation, verification and monitoring procedures which does in reality exclude independent scrutiny of sustainability claims once a host government has issued a letter of approval;**

2.9 Customers are being led to believe that offset activities they pay for ‘neutralise’ their emissions in close proximity to the time of their ‘offset’ payment. Though the intransparent nature of the voluntary ‘offset’ market makes it difficult to ascertain this indication, close proximity of ‘offset’ activity to the emission people pay to have ‘offset’ appears to be the exception rather

⁵ See Chapter 4 of ‘Carbon Trading. Critical Conversations’ for details of the Ecuador case study.

⁶ Such projects are not eligible for the Gold Standard label due to their potential to exacerbate land use conflicts and the unresolved impossibility to accurately measure carbon fluxes in terrestrial ecosystems.

⁷ See footnote 2; ‘Trouble in the Air’ is available at www.carbontradewatch.org. Of particular relevance is the chapter ‘Low-hanging fruit rots first’ by Graham Erion..

⁸ Forthcoming FERN publication on the carbon market in India.

than the rule. In this circumstance, the ‘offset’ market is based on ‘future value accounting’ whereby carbon ‘offsets’ that are expected to be made in the future are presented to customers as having been offset in the present or immediate future;

2.10 While carbon consultancies are keen to claim the credit for a success story, their willingness to take responsibility for failure pales in comparison. Most offset companies issue legal disclaimers absolving them legally from responsibility for their project partner’s inability to implement projects in such a way that the carbon savings / extra carbon storage is ensured. In the Cold Play case, while Ms. Miele claims that CNC has a “condescending” attitude and that “they do it for their interests, not really for reducing emissions. They do it because it’s good money,” CNC claims that it funded only part of the programme and that WSD were contractually obliged to provide water and ongoing support for the plantations. By June 2006, two months after the report in the *Sunday Telegraph*, the CNC was still offering on its website dedicated mango trees at this location to Coldplay fans and the project continues to be presented as another of the company’s success stories. There has been no transparency or accountability to the people who have paid to see this project realised that things might not have been going according to plan.

3. FERN comments on specific questions raised in the consultation document:

Q1: Do you agree that the Government should publish a Code for offset providers?

Yes, with the qualification that the consultation document raises doubts as to whether the proposed Code would provide the promised ‘reliable and authoritative information’, including a clear acknowledgment of the impossibility of verifying offset reduction claims because of their reliance on hypothetical, counterfactual storylines of ‘how many emissions would have happened if’ as the basis for calculating the volume of credits they can sell.

Q2: Do you agree with the proposed aims of this Code?

How does the Government envisage to ‘increase consumer confidence in the integrity [...] of the offset products available’ in light of the inherent impossibility to verify whether the claimed volume of emission reductions is truly additional to those that would have happened anyways?

Q5: Do you agree that the most appropriate credits to demonstrate best practice in offsetting are one, or a combination of, CERs, EUAs or less easily, ERUs?

1 – FERN notes with concern that the consultation document fails to differentiate adequately between emission permits (or EUAs) and project-based offset credits (CERs and ERUs). The difference between these two categories is crucial: Emission permits do not suffer from the inherent impossibility of verification in the way that project based offset credits do, which – as outlined above - rely for their calculation on counterfactual, hypothetical, and thus unverifiable stories of ‘what would have happened if’. The volume of emission permits issued can – at least theoretically – be measured with relative precision by monitoring fossil fuel emissions at the source of emission while the volume of carbon credits claimed by project based offsets can by definition not be verified. The best possible is reducing the range of scenarios from which a guess is derived. But determining the volume of ‘offset’ credits will always remain an unverifiable guess.

2 - A BBC Radio Five Live programme 'Trading Trees' in November 2006 exposed how tree planting 'offset' projects in Britain were claiming carbon credits for the planting of trees that would have been planted anyhow. This indicates that, double-counting issues aside, there is a significant potential for offsetting tree planting projects carried out in the UK not being additional.

Q7/Q8: Do you agree with the proposal to use the government-agreed database of emissions figures as the approved method of calculating emissions to be offset?

Yes, there should only be one calculator used by all offset providers to determine emissions and which also sets the value of emission factors and default values where these are necessary. I remains unclear what the Government considers as 'business emissions' – is this equivalent to industrial emissions?

Q10: Do you agree that the Code should require companies offering offsetting at the point of sale with other goods or services, to give consumers a compulsory choice or a 'default option'?

FERN disagrees with the proposal to make offsetting a compulsory choice or 'default option' because we consider 'offsets' as a distraction from the real task at hand, and of particular relevance in the context of this question, we consider it unacceptable for consumers to be pressured into paying for an ultimately unverifiable commodity which continues to be marred in controversy.

Q12: Are there any other conditions that should apply to the use of the quality mark?

1 - The consultation document rightly highlights that 'offsets' do not deliver „emissions reductions“⁹. However, the perception is widespread, and aided by offset company advertising and statements to this effect, that 'offset' schemes reduce emissions. It is of utmost importance that any Code of Best Practise provide clear guidance that will prevent the perpetuation of this false assertion. This will require, at a minimum, careful monitoring and regulation. **It will also require that any information provided by the Government on this aspect is unambiguous and clearly spells out throughout the material produced that offsets do not reduce emissions.** Application of the quality mark should be conditional on offset providers refraining from making misleading statements about 'offsets' *reducing* emissions.

2 – It appears to invite unnecessary confusion and potential misinformation if an offset provider is allowed to use the quality mark even if only part of the projects on offer fulfil the Code requirements. Experience elsewhere with this practise points to the significant threat of misleading advertising on the part of the provider. E.g. logging companies receiving a quality mark for good forest management even if only part of their operations are well-managed have been found to market themselves as if their entire operations were in compliance with the quality standard. Should the Code allow for such practise, the requirements for independent monitoring would increase significantly.

⁹ See 3.6, Page 8 of the consultation document.

Q13: Do you agree that these six points are necessary information to be made available to consumers?

Yes. In addition, Kollmuss et al. document in their December 2006 report 'Voluntary Offsets For Air-Travel Carbon Emissions' that for-profit 'offset' companies invest only a mean of 43.4% of the income from 'offset' sales into projects¹. The actual figures may well be even lower as calculations were based on aggregate figures provided by the 'offset' companies themselves. To ensure adequate consumer information, the Code should ensure that information on how much of a client's money is spent directly on the project (excluding monitoring and verification audits and documentation) and how much is spent on administrative and carbon accounting (including independent monitoring and verification audits) is provided. What constitutes direct benefits to the project and what should be listed as administrative or overhead / carbon accounting costs should be specified in the Code;

Q15: Should written confirmation of the credit purchase and cancellation be provided, a) to all consumers or b) on request only?

A – to all consumers

Q16: Do you agree that this breakdown of prices should be provided to consumers?

Yes, with the addition listed under Q14;

Q17: Do you agree that this price information should be provided at the time of purchasing offsets?

Yes, at the time of purchasing.

Q18: Does the government need to issue more guidance on how the process of purchasing and cancelling credits works in practice?

In comparison with the CDM, the voluntary offset market suffers from a significant lack of transparency and the following *aide memoir* from a conversation by the author with a carbon market analyst highlights the risk of projects in the voluntary 'offset' market selling credits more than once. The conversation had focused on the risk of a client being sold a credit that a project developer has already sold to someone else (see also comment by carbon 'offset' project developer SouthSouthNorth in 'Low Hanging Fruit', ref.5): *"Recycling of voluntary offset credits: According to [source] there are several examples of projects that have been around on carbon retailers' websites for years, and should therefore likely have sold their credits long ago. One example is the Desi Power biomass project in India. It has been promoted on [carbon consultancy name] website but also in relation with several events. There is no established standard for voluntary 'offset' projects, and no registry, therefore there is no transparency and no way to see whether credits from the same project are sold more than once. Since there are too many retailers in the market and too strong competition it has not been possible to agree on one standard or registry. [name of consultancy] is among the most serious players. Nevertheless, projects appear and disappear from their website and there is no clear trace of what happened to them. Also, the same consultancy sold what it claimed to be Gold Standard credits from a Brazilian project to [UK charity], although [source] had never heard about the project. Brazilian NGOs protested fiercely against the project. [source] agreed with my claim that although retail carbon sellers have an incentive to maintain credibility, they might not have that much money and the incentive to recycle credits is clearly there. There are also examples of projects financed by government*

funds that have subsequently sold 'offset' credits. Then they are not really additional."

Should the final Code of Best Practise require voluntary market offset project compliance with CDM procedures, such potential for double selling would appear to be minimized. A central database of all voluntary offset projects may also address this to some extent. Regardless of the details of the Code or regulatory framework, use of the quality mark must be conditional on offset providers ensuring transparency at a level that allows the interested public to track which projects the credits are sourced from, the volumes purchased from the various projects and the volumes sold. For adequate transparency, such information will need to be verifiable by the interested public, and arguments that disclosure of such information infringes on client confidentiality will require close scrutiny.

Q19 / Q 20: Is the timescale for purchasing credits appropriate? Is the timescale for cancelling credits appropriate?

Of key relevance appears to be what is communicated to people who buy offset credits. It appears that people who purchase such credits assume that the offset occurs in close proximity to the emission they seek to 'offset'. A significant improvement over current practise would be if companies were obliged to openly report on the time lag between the sale of an offset credit and the occurrence of the reduction.

The 2005 Climate Care annual report gives an indication that there is a time lag between sale and occurrence of the reduction without any explanation of the length of this time lag: The foreword by the director states that 99,000 credits were sold in 2005 yet the projects Climate Care lists to discharge their CO₂ liability only amount to less than 70,000 credits. No explanation is provided in which time scale the difference is expected to be made up or whether clients buying the credits were aware of the difference between the volume of credits sold and the volume of credits received from the projects listed in the annual report.

Q21: What evidence should offset providers have to show to demonstrate compliance with the Code?

While carbon consultancies are keen to claim the credit for a success story, their willingness to take responsibility for failure pales in comparison. Most offset companies issue legal disclaimers absolving them legally from responsibility for their project partner's inability to implement projects in such a way that the carbon savings / extra carbon storage is ensured. In the Cold Play case, reported in the national press in 2006, while the local project manager claims that CNC has a "condescending" attitude and that "they do it for their interests, not really for reducing emissions. They do it because it's good money," CNC claims that it funded only part of the project and that the local partner was contractually obliged to provide water and ongoing support for the plantations. By June 2006, two months after the report in the *Sunday Telegraph*, the CNC was still offering on its website dedicated mango trees at this location to Coldplay fans and the project continued to be presented as another of the company's success stories. There has been no transparency or accountability to the people who have paid to see this project realised that things might not have been going according to plan.

While this aspect may in part be addressed if only credits can be used that can demonstrate that the claimed reduction has in fact happened, as would be the case if CDM procedures were to be applied to

projects eligible for the quality mark, the issue of ensuring people who bought such credits in good faith remains because the project may still fail at some time in the future.

4. Recommendations for action beyond the adoption of a Code of Best Practise

4.1 Contrary to current practice, ministers should be very strongly discouraged from proposing that civil servants offset their airline flights' emissions and instead focus their attention on generating political support for subsidy shifts, for ending fossil subsidies, in line with the World Bank's Extractive Industries Review recommendation and for ensuring policies that will bring about a just and swift transition to low-carbon technologies.

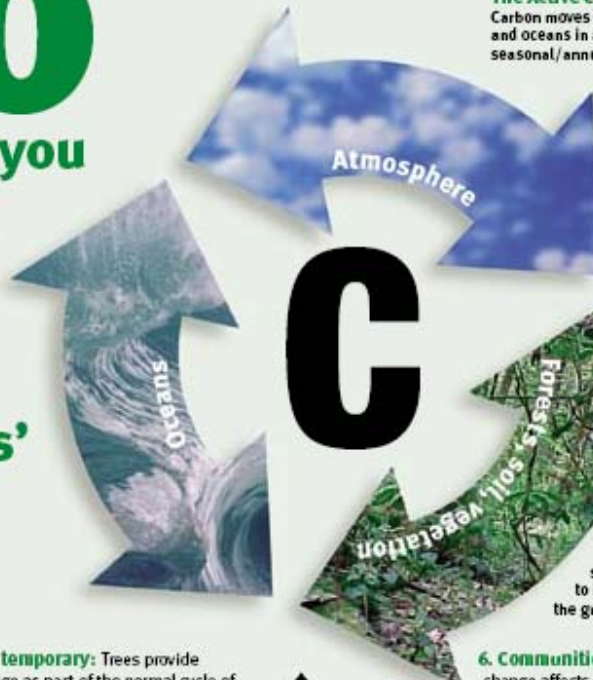
4.2 Contrary to current practise, the UK government should avoid using carbon ,offsets' to meet its Kyoto Protocol commitments, in the EU Emissions Trading Scheme, and in other government or government-supported climate programmes. Instead, emphasis should fall on measures effective in fostering a just transition away from dependence on fossil fuels, including large-scale public works, subsidy-shifting, conventional regulation, taxation and other non-trading market mechanisms, and support for movements in the UK and abroad which are already helping to slow the movement of fossil carbon out of the ground (see *Carbon Trading*, cited above). The evidence, both from academic and activist research, increasingly documents the advantages of these policy instruments over carbon trading.

These comments are submitted on 16 April 2007 by Jutta Kill, FERN 1c Fosseway Business Center, Stratford Road, Moreton-in-Marsh GL56 9NQ Tel. 01608 651 864 (O), email jutta@fern.org

Appendix 1

CO₂NNED THE CARBON CYCLE

10 things you should know about tree 'offsets'



The Active Carbon Pool:

Carbon moves between the forests, atmosphere and oceans in a complex natural rhythm of daily / seasonal/annual and multi-annual cycles. The overall amount in all three carbon stores together rarely increases in nature. This is 'active' carbon.

Fossil Carbon Pool:

Some carbon is locked away and rarely comes naturally into contact with the atmosphere. This 'fossil carbon' is stored permanently in coal, oil and gas deposits and therefore is not part of the active carbon pool. When humans mine and extract these reserves this inactive fossil carbon does not go back in the ground, but is added into the active carbon pool, disrupting a delicate balance. This is one of the reasons that the concept of 'offsets' is flawed. Offsets allow extraction of oil, coal and gas to continue, which in turn increases the amount of fossil carbon that is released into the active carbon pool disrupting the cycle. That is why campaigners argue that genuine solutions to climate change require us to keep fossil carbon (oil, coal and gas) in the ground.

1. Carbon in trees is temporary: Trees provide temporary carbon storage as part of the normal cycle of carbon exchange between forests and the atmosphere. Trees can easily release carbon into the atmosphere through fire, disease, climatic changes, natural decay and timber harvesting.

2. One-way road: The release of fossil carbon in contrast is permanent and, over relevant time scales, will accelerate climate change by increasing the overall amount of carbon in the atmosphere – the very cause of today's climate change. Fossil fuels such as coal, oil and gas are locked away and their carbon is only released when humans dig up and burn them for energy. Once released, they become part of the active carbon pool, disrupting the natural cycle.

3. Fake credit: Carbon credits from tree planting claim that carbon stored temporarily in tree plantations can justify permanent releases of fossil carbon into the atmosphere without any harm to the climate.

4. Big foot: Carbon credits from tree planting increase the ecological debt of the global North. The more fossil fuels a Northern country consumes, the more land it is entitled to use to 'offset' its emissions. This is unfair and increases the already high ecological footprint of the North.

5. Subsidies for mega-plantations: Carbon credits from tree planting stand to provide a new subsidy for the plantations industry. Large-scale plantations have a long list of negative impacts on forests and forest peoples and often exacerbate local land disputes and violence.

6. Communities suffer twice: First, climate change affects the livelihoods of forest peoples and rural communities through increased droughts, floods, forest fires and deforestation. Second, carbon credits from tree planting promote the expansion of large-scale tree plantations, which indigenous peoples and forest-dependent communities oppose in many parts of the world.

7. Ticking time bomb: Avoiding climate change requires drastic reductions of greenhouse gas emissions from fossil fuels. Offsets, however, allow emissions to continue under the false premise that they've been 'neutralized'. This just masks the real crisis and sentences future generations to live with fewer choices and worse conditions.

8. Forest fraud: Forests play a vital role in storing carbon and buffering extreme weather events. But linking forest restoration with carbon credits is a dead-end for forest peoples as well as for the climate. Halting the forest crisis requires action against the underlying causes of deforestation, not more fossil carbon in the atmosphere and more monoculture tree plantations occupying land needed by local communities.

9. Blind guess: Measuring carbon in forests is fraught with uncertainties. Scientists have found that estimates of the carbon balance in Canadian forests could vary by 1,000 per cent if seemingly small factors, such as increased levels of atmospheric CO₂, are taken into account.

10. Carbon credits from tree planting are a phony climate fix!



Prepared by forest campaigner Jutta Kill of European environmental group FERN. For more info, visit: www.sinkswatch.org and www.fern.org

Appendix 2

Uncertainty Revealed Year by Year

- **1998:** German ACGC cautions against counting growth of forests as “emissions reductions”.
- **1998 -:** Technocrats and NGOs propose “discounting” or “insuring” carbon credits derived from biospheric dumps.
- **1999-2002:** IIASA says Kyoto Protocol “completely unverifiable” due to accounting uncertainties. Proposes quantification and pricing of uncertainties.
- **2000:** VERTIC says forestry and land use “must not be used to meet emissions reductions commitments” since changes to carbon stocks will “rarely be verifiable”.
- **2000:** IPCC land use panel assumes without evidence that emissions and “removals by sinks” can be aggregated quantitatively.
- **2001:** R. A. Houghton suggests carbon errors “as large as 500 per cent in the forest inventories of northern mid-latitudes”.
- **2001:** Royal Society cites “urgent need” to reduce uncertainties *before* land carbon sinks are used.
- **2001:** World methane sources found to be uncertain by “20 to 150 per cent”.
- **2003:** UN, consultancy and NGO discounting and insuring proposals continue to leave uncertainty unquantified or to ignore it.

Appendix 3

Ignorance Revealed Year by Year

- **1990s-2003:** “Missing terrestrial sink” of $110 \pm 80 \text{ GtC}$, or $>3 \text{ GtC/yr}$ (= half of annual fossil fuel emissions), remains unfound.
 - **1990s:** Scientists warn that ocean warming could result in sudden catastrophic releases of methane from methane hydrates on sea floor
 - **1998:** German ACGC warns that “complex nonlinear dynamics” of terrestrial ecosystems sets them apart from “energy-related processes”.
 - **2000:** Review article in *Science* warns that unanticipated “feedback effects between carbon and other biogeochemical and climatological processes will lead to weakened sink strength in the foreseeable future”.
 - **2001:** UK Met Office calculates tree-planting in boreal regions would heat planet rather than cool it due to albedo effects.
 - **2001:** Met Office reveals lengthening of dry seasons could abruptly result in catastrophic releases of carbon through fires in Amazon, pushing temperatures up $6-8^\circ \text{C}$. in 100 years.
 - **2003:** UN, consultancies and NGOs continue to speak as if “discounting” and “insurance” can cover the possibility of unanticipated findings.
 - **2003:** CDM Methodological Panel rejects methodology for Planitar project which was based on assumption of stable exchange rates between US\$ and Brazilian Real.
-